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UNIVERSITY OF ALBERTA

MICROTEACHING: INSERVICE EDUCATION FOR ADULT EDUCATORS

BY

BARBARA SCHUR

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of MASTER OF EDUCATION

In

ADULT AND HIGHER EDUCATION

DEPARTMENT OF ADULT, CAREER AND TECHNOLOGY EDUCATION

EDMONTON, ALBERTA

SPRING, 1991

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ISBN. 0-315-66657-9

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DEGREE: Master of Education

YEAR THIS DEGREE GRANTED: 1991

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Sudies and Research for acceptance, a thesis entitled Microteaching: Inservice Education for Adult Educators, submitted by Barbara Schur in partial fulfillment of the requirements for the degree of Master of Education in Adult and Higher Education.

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Date: April 12, 1991

DEDICATION

To my parents, Kornel and Irene Schur, for helping me become who I am today.

ABSTRACT

Microteaching is a teacher education technique that allows teacher to prepare and present a short "mini-lesson" to their peers. An opportunity for feedback and review of the video taped lesson follows each presentation. This research incorporated the microteaching technique in an inservice workshop for adult educators

The educators who participated in this workshop were instructors at Arctic College, Aurora Campus, in Inuvik, Northwest Territories. Data collected throughout the workshop were analyzed in order to answer the research question, "When used as a means of inservice education, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?"

The workshop was divided into two parts. During the first half day, the participants discussed adult learner characteristics, motivation of adult learners and teaching techniques and methods. This provided participants the opportunity to share experiences and knowledge and, just as importantly, it provided them an opportunity to establish rapport as a group. Microteaching occurred over the next two days. Each person conducted two "mini-lessons" for their peers. There was an opportunity for discussion and peer feedback after each lesson.

Observations, interviews and journals were the three methods of data collection employed in this study. The researcher's field notes, video tapes and observation comment forms were the three methods used to gather observational data. Triangulation was used to ensure the accuracy of the observational data..

The findings of this research indicate that when used as inservice education for adult educators, microteaching can be an effective means of inservice education. It is illustrated in the

findings that microteaching is effective in building rapport and collegiality among staff. It is also effective in developing a stronger awareness and understanding of adult learner characteristics. Also shown in the findings, is the increase in the instructors' confidence in their own teaching abilities. There was however, no indication in the findings that microteaching is an effective means of providing instructors with new teaching skills and techniques.

ACKNOWLEDGEMENTS

I want to express my gratitude to all who helped me during the preparation of this thesis.

To Dr. Paula Brook, my advisor, for her generous assistance, support, encouragement and guidance throughout the study.

To Dr. Sande, Dr. LaRocque, and Dr. Archer, committee members, for their valuable contributions and helpful suggestions.

To Mr. Gowman and Mr. Cleveland of Arctic College for their cooperation and assistance.

To the staff of the Science Institute of the Northwest Territories for their logistic support.

To my colleagues in Adult and Higher Education for their enthusiasm, and encouragement.

Above all, to the adult educators at Aurora Campus, who participated in the study.

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CHAPTER ONE
Background to the Study

Introduction

Adult education is a very broad field, with many diverse functions, roles and outcomes. Merriam (1985) discusses some of the problems that result from this diversity. "The dynamic and pluralistic nature of the field, with its numerous philosophical orientations, gives rise to issues and problems that pervade the training enterprise" (p. 92). A recurring theme throughout the adult education literature is the need for systematic training for adult educators. One area of possible concern resulting from the lack of systematic training might be the limitations of the knowledge, attitudes, and skills that adult educators possess in areas such as teaching theories and methodologies. This study explored, through microteaching, the teaching knowledge, attitudes, and skills of five adult educators in a post-secondary institution. It looked at their experiences and changes that occurred as a result of this developmental process

Background to the Study

Adult Education

"Adult Education is the process by which men and women (alone, in groups, or in institutional settings) seek to improve themselves or their society by increasing their skill, knowledge or sensitiveness; or it is any process by which individuals, groups, or institutions try to help men and women improve in these ways" (Houle, 1972, p. 32). In other words, adult education

is a process initiated either by the learners or by the institutions concerned with increasing the skills and knowledge of adults. Adult education is becoming more widely recognized and accepted as an important process for enabling adults to achieve a variety of goals. Little emphasis, however, has been placed on the educator whose role it is to facilitate this process.

As Boshier has stated, adult education is rapidly growing and is assuming a very important role in society; however, little has been done to ensure that adult educators themselves have appropriate and sufficient training. Adult education is not only a means of educating people in basic skills but also of educating for employment, career advancement, enjoyment and leisure. Because the function of adult education is expanding, the role of an adult educator is also expanding and becoming more important. In order for the educators to be able to effectively fulfil the responsibilities of their expanded role, more importance needs to be placed on the training of adult educators.

Boshier (1985) acknowledges that adult education is rapidly assuming a very important role in today's society and that more attention should be paid to training of adult educators.

> As adult education becomes less marginal and is adopted as an instrument to facilitate attainment of social, economic and cultural goals, it is too important to be left to untrained amateurs, no matter how gifted. (Boshier, 1985, p.5)

Harris (1989) also emphasizes the necessity for appropriate and effective inservice training for adult educators. "The heavy reliance upon *people* to perform nearly all tasks required for building and maintaining quality educational programs is a reality that cannot be treated lightly. It is this reality that gives

inservice education its importance and its urgency" (Harris, 1989, p. 11).

Teaching Effectiveness

Elsdon (1984) suggests that an effective adult educator possess an understanding of adult learning processes and characteristics, and the ability to apply this understanding and create a positive learning environment. These statements echo those made by Legge (1967) who says that "The effective teacher is one who knows a great number of [teaching] methods . . . and selects those most suitable for the class he [sic] has with him" (p. 2). Legge concludes by saying that "the effective teacher is one who can use the chosen method with skill" (p. 2).

Lindsay (1984) states that teaching effectiveness should be looked at as a series of interrelated and interacting skills, behaviors and attitudes. Centra and Bonesteel (1990) support Lindsay's statement. "Teaching is more complicated than any list of the qualities or characteristics of good teaching can suggest" (p. 11). The authors feel that creativity and flexibility play an important role in teaching and that effective teaching can be achieved through a variety of approaches.

Microteaching

One method that has been used in teacher training programs is microteaching. This technique was introduced at Stanford University in the early 1960s by D. W. Allen and his associates. Microteaching is a teaching situation which is scaled down in terms of time and numbers of students. The trainees performing the teaching role are expected to concentrate on a limited number of specific teaching skills or behaviors in each lesson.

The microteaching process consists of the following elements:

1. The trainee studies a specific teaching skill.

2. The trainee attempts to incorporate this skill in a five to ten minute lesson to a small group of students. This micro-lesson is recorded either on video-tape or on audio-tape.
3. The trainee receives feedback about the lesson, usually immediately after the lesson. This feedback can take the form of supervisor evaluation, self assessment or written evaluation.
4. The trainee utilizes the information from the feedback to improve his/her lesson. This lesson is then retaught.
5. The trainee again receives feedback about the quality of the second lesson. (Oddie, 1976, pp 11-12)

Context of the Study

Adult education in the Northwest Territories (NWT) is rapidly expanding and is assuming an important role in the social and economic growth of the North. A strong emphasis has been placed on education and training in order to better meet the economy's needs. A main concern is the inability of adult northerners to obtain new jobs or to fill existing ones. "For many people, this is a problem which represents a major barrier to self-reliance" (Northwest Territories Culture and Communication 1988, p. 4). The NWT government recognizes the important role that adult education plays in social and economic growth and has initiated and/or supported many training endeavors. "Our government is committed to developing a long-term education strategy which makes sure students have the skills to take advantage of career and business opportunities in all sectors and at all levels of the NWT economy" (Northwest Territories Culture and Communication 1988, p. 4).

Anne Hanson, Deputy Commissioner of the NWT, in her opening address at a Forum on Continuing Education held in Inuvik in 1988, illustrated the rapid growth of adult education in the Northwest Territories. "Adult education has made encouraging progress since 1982 with the establishment of Arctic College" (Northwest Territories Department of Education, 1988). As a result of the rapid growth in adult education, Arctic College now has six campuses throughout the NWT, and offers a wide range of courses including adult upgrading in basic skills, a university transfer program and numerous certificate and diploma programs.

Arctic College is the only postsecondary educational institution in the Northwest Territories and it plays an important role in providing progressive training opportunities. The campuses of Arctic College offer a number of academic, certificate, diploma, trades, and career development programs. The College works on a decentralized system with a small headquarters staff in Yellowknife supporting six campuses located throughout the large territory. These are: Yellowknife Campus, Thebacha Campus in Fort Smith, Nunatta Campus in Iqaluit, Kitikmeot Campus in Cambridge Bay, Keewatin Campus in Rankin Inlet and Aurora Campus in Inuvik. In 1989, there were more than 6,000 students registered in full and part-time Arctic College programs (Northwest Territories Culture and Communication, 1989).

Aurora Campus was chosen as the location for this study. Academic Upgrading, Community Health Representative, Secretarial Arts, Business, Recreation Leader and Cooking were among some of the programs offered in 1989. Student registration totalled 51 full-time students and 370 part-time students. The instructional staff numbered 21.

Significance of the Study

This growth in adult education is encouraging for northerners, but it is important to consider the quality and the effectiveness of the education programs. In order to maintain high education standards, the training and preparation of educators should also be an important consideration. Unfortunately, many adult educators in the Northwest Territories have had no formal teacher education and few of them have had experience in delivering classroom instruction, especially to adult learners. The difficulty created by the lack of trained adult educators is compounded by a lack of inservice training. Because of isolation and lack of resource people, time and money, no means of providing effective continuing professional education has been established. It becomes apparent that while adult education is expanding, insufficient emphasis is being placed on the continuing education of the instructors. Without a current knowledge of teaching techniques, teaching methods and an understanding of adult learners, adult instructors in the NWT have a limited number of alternative teaching strategies available to them. They also have no means of accurately assessing their own teaching performance.

This research incorporated the microteaching technique in an inservice workshop for adult educators at the Aurora Campus of Arctic College in the NWT. Data collected throughout the workshop were analyzed in order to determine to what extent the participants' teaching knowledge, attitudes and skills changed as a result of the microteaching. Once the extent of these changes had been determined, it was possible for the researcher to answer the following research question:

When used as a means of inservice training, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?

Definition of the Terms

The following definitions guide the study:

Microteaching. Microteaching is a controlled teaching situation in which class size and class time are reduced. Attention is focused on specific teaching skills and immediate feedback is provided by means of video tape recordings.

Adult educator. An adult educator is a person who has the responsibility to conduct educational activities that will assist or enable mature men and women to learn.

Inservice education. Inservice education refers to any planned program of learning opportunities provided to staff members of schools, co''eges or other educational agencies for purposes of improving the. performance of the individual in already assigned positions (Harris, 1989).

Teaching effectiveness. Teaching effectiveness refers to the interaction of the teaching knowledge, attitudes and skills of the instructors. "The factors (that contribute to teaching effectiveness) should be viewed as interrelated, interdependent and inseparable in contributing to teaching and learning" (O'Neill, 1988, p. 177). For the purpose of this study, teaching effectiveness will not include student performance and achievement.

The Methodology of the Study

This study incorporated the microteaching technique, developed at Stanford University, in a two and one half day inservice workshop for adult educators. The educators who participated in this workshop were instructing classes in Inuvik, Northwest Territories, at the Aurora Campus of Arctic College. Arctic College was chosen as the location for this study because the rapid growth of adult education in the North and the College's remote location have created a need for effective staff development opportunities.

Of the twenty-one instructors at Arctic College, five agreed to participate in this study. As participation was voluntary, it was assumed that those educators who responded affirmatively had an interest and a desire to improve their teaching effectiveness. The instructors were a diverse group whose education and experience varied greatly. This diversity among the participants was reflective of the diversity within the field of adult education.

The recruitment of these instructors was facilitated by the Vice-President of Arctic College, Aurora Campus, Mr. Jay Goman. Mr. Goman discussed the nature and purpose of the study with his staff members in January of 1990. Letters were then distributed, inviting each instructor to participate in a workshop which involved microteaching.

The workshop was conducted in two parts. Beginning the workshop was a half day seminar session in which participants discussed characteristics and motivation of adult learners as well as teaching techniques and methods. Microteaching and feedback sessions comprised the second part of the workshop which occurred over the next two full days.

Qualitative data were collected using these methods: observation, interviews, and participants' written reflections in the form of journal entries. Three methods of observation were

used: the researcher's field notes, observation comment forms and video tapes of the microteaching. Interviews were conducted at the end of the workshop, after the microteaching sessions had been completed. The purpose of these interviews was to collect information from the adult educators about their own experiences during the workshop. The last source for data were the journal entries participants were asked to make for one month after the workshop. These journals provided a written record of changes in the participants' insights and attitudes regarding their teaching.

Data collected throughout the workshop were analyzed in order to determine to what extent the participants' teaching knowledge, attitudes and skills changed as a result of the microteaching experience.

Organization of the Thesis

The thesis is organized in five chapters. Chapter One includes the description of the problem. The review of related literature is found in Chapter Two. A description of the methodology used in the study and the presentation and analysis of data collected during the study are described in chapters Three and Four. Lastly, Chapter Five discusses the implications the study can have for further research as well as the researcher's own conclusions and recommendations.

CHAPTER TWO
Review Of The Literature

Introduction

This chapter is a review of the relevant literature in three areas: adult educator competence and effectiveness, professional development and inservice training for adult educators, and microteaching. These are detailed areas; thus an effort was made to include only the literature relevant to this study.

Before beginning any endeavor to train adult educators, one must determine the qualities and competencies that an adult educator must possess in order to be considered effective. In order to be able to do this, it will be necessary to examine both adult education literature and literature on teaching effectiveness.

Adult Educator Competency and Effectiveness

Chamberlain (in Brookfield,1961) conducted a study to determine what were the competencies (knowledge, skills and attitudes) that an adult educator should possess in order to be considered professionally competent. He distributed questionnaires to a sample population of ninety people involved in adult education. The questionnaire listed 45 competencies; adult educators were asked to rank these in importance according to their own perceptions. "The top rated five competencies suggest that the successful adult educator realizes the potential of his [sic] likely customer and understands how to provide the

necessary conditions for the learning to take place" (Chamberlain, 1961, p. 148). These top five competencies are:

1. Believes that there is potentiality for growth in most people.
2. Is imaginative in program development.
3. Can communicate effectively--speaks and writes well.
4. Has an understanding of the conditions under which adults are most likely to learn.
5. Is also learning.

These are very broad and general statements of competencies. There are no statements in the study that give any indication of how these competencies can be exhibited by the instructor through specific behaviors.

Observational research conducted by Legge (1967) over an extended period of time has provided a more detailed description of the qualities and behaviors of an effective adult educator.

> The effective teacher of adults seems to be one who makes a satisfactory assessment of the particular situation he [sic] faces in order to establish the relationships and to select the methods which help the students to learn most easily. Instead of a generalized approach, he weighs up the particular characteristics, attitudes, motives, difficulties, etc, of the men and women in the particular group, the effects of time, place and environment, the conditions imposed by the subject and by his own personality, style and knowledge.
>
> The effective teacher is one who has relatively clear ideas about purpose, both in terms of what he hopes will be achieved by the students at a particular

meeting and in terms of the more long-term purposes.

> The effective teacher is one who knows a great number of methods through which he can create a learning situation, and who selects those most suitable for the class he has with him.
>
> More obviously, the effective teacher is one who can use the chosen method with skill. (Legge, 1967, p. 2)

A more recent publication by Elsdon (1984) suggests that the skills required of an adult educator include:

- an understanding of the individual learning processes, the strengths and obstacles of adults individually and in general as they are affected by developmental factors and by physical changes

- an ability to identify the motives of learners.

- an ability to identify learners' prior experience, knowledge, skills and attitudes, and to determine how these can be most effectively used as foundations for new learning

- an ability to form and maintain effective, responsible and mutually supportive learning groups

- sensitivity to enable the teacher to become empathetic to the great variety of individual differences, difficulties and strengths to be found in any group of adults, and to exploit these in support of individual and group learning processes

- curricular skills and inventiveness to weld all the foregoing into flexible and sensitive responses which meet the requirements of both the group and the individuals within it

- the realization that the adult learning group includes within it a store of experience and wisdom from which a teacher can learn, so that the exercise becomes a shared exploration of new territory. (Elsdon, 1984)

As asserted in the literature, an effective adult educator is one who recognizes the unique characteristics and motivations of adult learners and who can incorporate this recognition into the establishment of a positive learning climate. An effective adult educator also possess the perceptiveness and flexibility to chose teaching techniques and methods that are appropriate for the learners.

Adult education is a divergent field with many purposes, outcomes and theories. Thus, it is only when one moves away from adult education literature to the literature on teaching effectiveness that one can find more explicit statements of those teacher behaviors that can influence effectiveness.

Teaching Effectiveness

O'Neill (1988), in his review of research in teaching effectiveness, identified twenty instructional factors that influence teaching effectiveness. He grouped the factors into three stages: preactive, interactive and postactive. Factors included in each stage are as follows:

Preactive Stage - learning environment, teacher knowledge, teacher organization, and curricular materials.

Interactive Stage - teacher expectations, teacher enthusiasm, classroom climate, classroom management, teacher clarity, advance organizers, instructional mode, questioning level, direct instruction, time-on-task, variability, monitoring and pacing, and teacher flexibility.

Postactive Stage - feedback, teacher praise, teacher criticism.

O'Neill stresses that these factors should be seen as interrelated, interdependent and inseparable in their contributions to teaching and learning. O'Neill states that because of the relationship of these factors to each other, teaching effectiveness can be maximized only when one factor is applied in conjunction with the other factors.

In his article, Lindsay (1984) supports O'Neill's claim that teaching effectiveness should be looked at as a series of interrelated and interacting skills, behaviors and attitudes. "We still need to know what strategies and repertoires - of thought as well as action - teachers of adults use; we still need to know how these strategies and repertoires interact with adult learner motivation and capabilities, and we still need to know how to instruct present and prospective teachers of adults in acquiring and developing the confirmed strategies and repertoires" (Lindsay, 1984, p. 5).

Pratt (1989) makes a similar statement. "The nature of teacher competence changes as teachers move through developmental stages and, further, that the forms of competence that define excellence in teaching are interrelated" (p. 78).

> Clearly, 'effective teaching' involves more than the effective use of a set of skills. Just as the flexible use of a set of skills or techniques are a prerequisite

> for the performance of a Beethoven sonata, so they are essential for effective teaching. . . without the practise of skills accompanied by self-appraisal there is little hope of achieving the desired synthesis. (Perrott, 1977, p. 73)

Brophy and Good (1974) state that providing teachers with feedback can often help increase those teachers' effectiveness. "The teacher must learn to monitor his [sic] behavior or at least to get feedback about it if he [sic] is to shape the pattern of interactions proactively . . . " (p. 270). The authors explain that teaching involves such a rapid pace of action that a teacher is not able to monitor his/her behavior. Because of this they feel that often inappropriate teaching appears to result simply from a lack of awareness by the teacher. Feedback then, plays an important role in increasing teacher effectiveness. "Our findings illustrate that most teachers are willing to change their behavior if given specific feedback they can perceive as relevant and credible" (Brophy & Good, 1974, p. 291).

As indicated in this review, effective teaching is not achieved by applying concrete and specific skills and techniques. Rather, it is a process involving the combination and refinement of teachers' attitudes, knowledge, and skills. Continuing professional education, professional development, and inservice training and education are some terms that have been used to describe this process that enables teachers to develop and refine their competencies.

Inservice Education

Effective professional practice is based on skills, attitudes and knowledge of theory. Inservice education is any organized effort aimed at helping people grow, learn, improve,

enjoy, think and do. The underlying belief in these efforts is that all personnel can improve their performance. Harris (1989) feels that inservice education is necessary for personnel who are involved in leading educational activities. He focuses his discussion on the importance of people and the necessity of planning inservice opportunities that meet the needs of the people involved. "The heavy reliance upon *people* to perform nearly all tasks required for building and maintaining quality educational programs is a reality that cannot be treated lightly. It is this reality that gives inservice education its importance and its urgency" (Harris, 1989, p. 11).

Staff development is another term that refers to an organized effort that aims to help people grow, learn, improve, enjoy, think, and do.

> Staff development that is successful in changing teacher practice is a *continuous process*. But it is not a single activity that is accomplished in a day or even a week. . . . It necessitates practice with new techniques, strategies, methods and approaches, with feedback in a non-threatening environment. (Jones & Lowe, 1990, p. 8)

Joyce and Showers (1980) have identified five components of training--theory, demonstration, practice, feedback and classroom application--and have concluded that these components have more impact and are more effective when two or more components are used together. Their research looked at inservice training that combined the presentation of theory, practise and feedback. These authors found that alone, theory does not have much impact beyond increasing awareness, but, when it is "used in combination with the other training components, it appears to boost conceptual control, skill development and transfer" (p. 382). Practice under simulated

conditions proved to be an effective way of developing competency in a variety of teaching techniques.

Feedback alone does not appear to cause permanent changes in teaching behavior. However, when used in combination with one or more of the other components, feedback can be effective in increasing teaching competency. It is important to note that feedback should be regular and consistent in order for teachers to change and to maintain those changes. Feedback can be either structured or unstructured and can be provided in a number of ways: self assessment, peer feedback and coaching. "Structured feedback involves learning a system for observing teaching behavior and providing an opportunity to reflect on teaching by using the system" (Joyce & Showers, 1980, p. 382). Unstructured feedback (feedback consisting of informal discussion following observation) "best accomplishes an awareness of teaching style and as such can be very useful in providing 'readiness' for more extensive and directed training activities" (Joyce & Showers, 1980, p. 384).

A realistic goal of inservice education and training should be refinement of existing skills rather than the acquisition of new skills. "Generally, speaking, 'fine tuning' our existing approaches is easier than mastering and implementing new ones, because the magnitude of change is smaller and less complex" (Joyce & Showers, 1980, p. 380). This type of approach is more successful for increasing effectiveness. "Training oriented toward fine tuning consolidates our competence and is likely to increase our effectiveness" (Joyce & Showers, 1980, p.380).

In his writings about professional education, Jarvis (1983), places emphasis on what he feels to be the ingredients for competency. He explains how competency in professional practise can be attained.

> Competency is only achieved when the occupation is performed proficiently in all of its aspects, i.e. good

> practice based upon sound theory. This demands that the practitioner should have both the knowledge and the skill to undertake the demands of the job, proficiency in one but not the other area is less than competency. (Jarvis, 1983, p. 8)

In a 1956 publication, Houle presented a list of objectives for training programs aimed at increasing the effectiveness of those involved in adult education. The emphasis that Houle places is on developing the adult educators' understanding of the field and not merely upgrading of his or her efficiency as a service-provider.

Without an increased understanding and awareness of the field of adult education, it would be difficult to improve the effectiveness of practise as "knowledge, skills and attitudes together form the essentials of professional practice" (Jarvis, 1983, p. 70).

The National Adult Basic Education (ABE) Staff Development Consortium originated as a result of the efforts of ABE staff development professionals who felt they could benefit through shared experiences and research. As a result of the efforts of members of the Consortium, a set of staff development principles and techniques was developed. A survey instrument was sent to a sample of ABE practitioners in order to solicit responses regarding the appropriateness of the principles and techniques that had been identified. The following is a brief description of the results of this survey.

Principles:

> The most highly ranked general principles stressed the importance of a positive climate for professional development. . . .
>
> Staff development activities are more likely to be successful when the participants choose their

involvement and when training is linked to an individual professional development plan.

Though staff development is an on-going process, activities focus on goals that are meaningful and attainable.

Evaluation is an integral component of ABE staff development. . . .

When planning a staff development program, participant and program needs are assessed. . . .

Techniques:

For teaching practices that require complex thinking skills, more time and practice should be provided.

Nonjudgemental feedback, support and technical assistance are critical when training staff to practice new approaches.

Training should reinforce the perception of adult educators as 'facilitators'. (National ABE Staff Development Consortium, 1987)

Another study, closely related in theme and purpose, was conducted by Dashcavich in 1988. This study explored the professional development needs and preferences of Alberta adult education instructors, the extent to which these needs were being met and, as well, to determine if there was a core of common professional development needs among instructors. Dashcavich based his research on data collected through survey questionnaires and interviews.

Even though they were instructors, formal preparation in teaching adults was not necessarily the best preparation for their own instructional areas. Knowledge and experience in their specialty

areas were deemed to be important forms of preparation.

Even though many instructors indicated only a moderate level of need for further preparation, they were generally in favor of participation in professional development activities. Their reasons varied but tended to relate to keeping abreast of new knowledge and technical advances in their area of expertise. (Dashcavich, 1988, pp. 96-98)

Participants in Dashcavich's study were asked to indicate their preferences for professional development activities. Results are listed in order of preference:

workshops and seminars
short courses
on-the-job activities
conferences
university, either degree or diploma programs
correspondence.

The findings of the studies by both the ABE Staff Development Consortium and Dashcavich are particularly relevant for the planning and implementation of inservice education and professional development activities. Through the Consortium's study it has become apparent that adult educators do recognize the importance and value that professional development can have. Practitioners appear to be willing to participate in these activities if they are in keeping with what they perceive to be their own needs. It is important, therefore, to make an effort to design inservice activities that reflect and respect the participants' needs, experience and expertise. The findings in Dashcavich's study indicate that adult educators would prefer to

participate in workshops and seminars over other professional development activities.

There appears to be agreement in the literature that combined theory, practise and feedback are essential ingredients of inservice training. Also indicated in the literature is that, to be most effective, inservice training programs should be part of a continuing process that meets instructors' needs in format and content. Microteaching is one such technique that can be adapted to meet the varying needs of participants.

Microteaching

Microteaching developed as a teacher education technique that allowed teachers to apply specific teaching skills to prepared lessons in a series of five to ten minute encounters with a small group of students, often with the opportunity to observe the results on video tape. (Bush, 1968, Preface)

There can be many variations of this technique, but essentially it "is real teaching, in which the complexities of normal classroom teaching are lessened, in which there is a focus on training for the accomplishment of specific tasks, which allows for the increased control of practice, and which greatly expands the normal knowledge-of-results or feedback dimension" (Allen & Ryan, in Macleod, 1987, p. 531).

Olivero (1970) stresses the important role that feedback plays in the microteaching process. He feels that teachers will be more likely to improve instruction as a result of introspection and self evaluation than through the process of delayed supervision. The author found video feedback to be effective in producing significant changes in the following:

1. Establishing set--establishing cognitive rapport and immediate involvement in the lesson.

2. Establishing appropriate frames of reference
3. Achieving closure.
4. Using questions effectively.
5. Recognizing and obtaining attending behavior.
6. Control of participation.
7. Providing feedback.
8. Employing rewards and punishments (reinforcement).
9. Setting a model--improved ability to analyze behavior and the ability to imitate it successfully. (Olivero, pp. 18-21)

Other aspects that add to the value of the feedback component of the microteaching process are the immediacy and the relevance of the feedback. Immediate feedback reinforces desired behaviors and more quickly extinguishes undesired behaviors. When feedback "provides adequate information about the discrepancy between desired performance and actual performance, it facilitates both attitudinal and behavioral changes" (Perrott, 1977, p. 3).

Recording the microteaching on video tape allows instructors a unique opportunity to engage in self-assessment and self-evaluation. Fuhrmann and Grasha (1983) state that "self-evaluation can be a valid and effective assessment tool. It is particularly helpful in altering behaviors toward specific goals, especially when the self-evaluation leads to a positive attitude towards growth. People who learn to understand and use self-evaluation techniques are likely to become more questioning, more analytical, more self-challenging, and more curious. These are all characteristics associated with effective teachers" (p. 213).

> Microteaching not only is able to determine what kinds of relevant inservice instruction are necessary but has the built-in ingredients for designing an

> individualized program for each of the participating teachers. . . . the more individualized the inservice program for teachers, the more likely the goals will be realized. (Olivero, 1970, p. 55)

The identification of specific teaching skills is essential to the success of the microteaching process. It is important that the participants involved know what skills and behaviors will be expected of them during the presentation of the lesson. "Analyzing teaching into specific skills reduces the complexities of teaching and gives direct practical guidance to the teacher about the behavior desired" (Perrott, 1977, p. 2).

Microteaching has proved to be a successful technique for training pre-service teachers. Franzoni (1971) had conducted a study in which he developed a workshop utilizing a variation of the microteaching process for training pre-service teachers in the use of basic communication skills.

A study was conducted by Lederman and Gess-Newsome (1989) to investigate the effects that microteaching had on preservice science teachers' perceptions of teaching, instructional behaviors, decision making and "any other changes which occur as a function of time throughout the duration of the course" (p. 2).

The results of these two studies illustrated that microteaching was effective in teaching new skills (Franzoni,1971) and in changing attitudes and perceptions of teaching (Lederman & Gess-Newsome, 1989) among preservice teachers.

An inservice training course that incorporates microteaching has been offered in Britain for several years. The aim of this course is "to improve the effectiveness of your teaching, thereby giving you greater job satisfaction and your students increased opportunities for learning" (Wilkinson, 1985).

Wilkinson used the comments of the participants as a measure of the effectiveness of the course. Reasons that participants gave for attending the course included: to build confidence, to improve skills, and to gain greater understanding of adult education theory and methods. Comments made by participants at the end of the course indicated that they felt the course had been successful, they felt the objectives had been met and they felt more confident as a result of their participation.

Another example of workshops which utilize a variation of the microteaching process are the Instructional Skills Workshops developed at the Vancouver Vocational Institute in 1978. Douglas Kerr designed these workshops to assist in the training of new instructors at the Institute. The workshops were field-tested with several groups of experienced instructors whose general reaction was that the workshops are a valuable experience regardless of the number of years an individual had been teaching.

The workshops are conducted so that everyone participates fully, providing the opportunity to examine both learning and instruction in a first-hand experiential way.

In these workshops, participants prepare and present a mini-lesson to their peers. This lesson is video-taped. A feedback discussion and review of the taped lesson follows. The peers are then expected to complete a worksheet which includes their comments and suggestions. This worksheet serves as written feedback and is given to the participant who presented the lesson.

The success of the British and the Canadian Instructional Skills workshops illustrate that microteaching is not limited to being a teacher education technique to be used only for preservice teachers of children. This technique can also be used effectively for improving the skills of teachers of adults.

Peer Teaching

Another term often used to describe a similar inservice technique is peer teaching. The main difference between microteaching and peer teaching is the use of video-tape recording of the mini-lessons in microteaching sessions. Weil and Joyce (1978) discuss this technique and the benefits that peer feedback and peer coaching can have.

> Peer teaching is just what the name suggests. It means that teachers practice teaching skills or models of teaching in groups, taking turns playing the role of learners. Peer teaching accomplishes several things. First, it enables you to practice a new teaching strategy before you try it out with students. . . . It provides practice, not only in the actual teaching but also in the planning for it.
>
> A second benefit is that, because you do it with one another, you gain the kinds of feedback that fellow professional teachers can give. If a half-dozen teachers are practicing the same model and take turns teaching it, you can coach one another. Often when you are in the role of student you see things that you do not see when you are in the role of teacher. Thus, you can avail yourselves of another's professional opinion and coaching.
>
> Third, peer teaching gets people working together to improve their classroom performance. It increases dialogue about the dynamics of teaching, gives a language for discussing the problems of teaching, and provides a warm and enriching experience in itself. Also, when you teach with others, you add their ideas to your own. (Weil & Joyce, 1978, pp. 19-20)

Fuhrmann and Grasha (1983) also discuss the advantages of using peer input and feedback as a means of improving teaching effectiveness. Colleagues who also have to struggle with the demands of teaching are another source of information about an individual's teaching. Because they are experts in teaching, or at least relatively experienced in it, colleague's comments and suggestions can be of great value. As Fuhrmann and Grasha state, "having someone with whom to discuss your teaching concerns . . . is an important aspect of improving what you do" (p. 208).

Another advantage of peer input and feedback is the extent to which it can increase collegiality. A support team made up of colleagues "becomes a safe place where it is acceptable to explore successes and failures, frustrations and joys, similarities and differences" (Fuhrmann & Grasha, 1983, p. 208). As a result of the necessity of peer input and feedback, microteaching provides an excellent opportunity for the establishment of such a peer support team.

An article by Macleod (1987) reviews the research on the development and use of microteaching. He has found that though there has been a great deal of research into microteaching, the findings of previous research are sometimes contradictory and somewhat limited. However, despite this lack of conclusive evidence, Macleod does state that there are positive indications that microteaching can be used to influence the thinking and the attitudes of teachers.

> What *has* become clear from the accumulated research is that the preparation phase of microteaching, incorporating modelling and discrimination training, can be of critical importance in the acquisition of skills and that the role of practice in the acquisition of skills may be less critical than it has been assumed to be. This

> kind of outcome draws attention to the thought processes of microteaching participants and to those models of microteaching which emphasis cognitive processes. (Macleod, 1987, p. 538)

In his article, Macleod (1987) discusses a cognitive model for microteaching. This model suggests that microteaching can be seen as a procedure that facilitates long term changes in teachers' thinking about teaching rather than short term changes in their teaching behavior. "Attention was drawn to the importance of students' preexisting conceptual structures when they entered a microteaching programme, to the apparent stability of these structures and to the effect upon these structures of discipline or teaching subject background" (Macleod, 1987, p. 537).

"Microteaching would seem to provide an exciting medium both for the examination and identification of expert teachers' theories of teaching and for the detailed examination of how novices think about their teaching in settings of reduced complexity" (Macleod, 1987, p. 539).

This review of literature on microteaching has highlighted some important considerations. When used as a teacher education technique, microteaching can be effective in improving teacher performance for both teachers of children and teachers of adults. The feedback component of microteaching is valuable in that it increases both collegiality and communication. A final consideration is the positive effect that microteaching can have on changing the attitudes of teachers.

Conclusion

This chapter provided a review of research and literature in three areas: adult educator effectiveness, inservice education and training, and microteaching.

It is suggested in the literature that effective adult educators are those who are sensitive to the characteristics of adult learners and possess the flexibility to adapt their teaching methods and techniques to meet the needs of the learners.

Reflecting the diversity of purposes and goals of adult education, the literature on the professional development and inservice training of adult educators is general and contains few specific guidelines. The literature does indicate that the format for teacher education programs should combine theory, practise and feedback and should reflect the participants' needs and allow for the sharing and exchange of experience and expertise.

The literature on microteaching indicates that it is an effective teacher education technique for both preservice and practising educators of children and of adults. An important element of microteaching is the feedback sessions. The opportunity to receive peer feedback increases the skills, knowledge, self awareness, and collegiality of the adult educators.

CHAPTER THREE
Methodology

Introduction

This chapter describes the means of data collection used to answer the research question: "When used as a means of inservice education, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?" The recruitment of participants and the development and implementation of the workshop are discussed first. A description of the data collection instruments and a description of the strategy that was used for data analysis follows.

The study incorporated the microteaching technique in a two and one half day inservice workshop for adult educators. The educators who participated in this workshop were instructors at Arctic College, Aurora Campus in Inuvik, Northwest Territories. The workshop included a half day seminar session on adult learner characteristics, motivation of learners, and teaching skills and techniques. This was followed by two days of microteaching. Qualitative data regarding the microteaching experiences of the participants were collected throughout the workshop using observation, interviews, and participants' journal entries.

Background to the Workshop

Arctic College was chosen as the location of this study for two reasons. First, the rapid growth of adult education in the north has created a need for staff development and inservice

training that is available to all instructors regardless of their experience. The second reason was that the remote and isolated location of the campuses makes it difficult to ensure that all instructors have access to staff development opportunities.

Before proceeding with the development of the workshop, the researcher obtained permission and approval from the President of Arctic College and the Vice President of Aurora Campus. It was also necessary to obtain a research license from the Science Institute of the Northwest Territories. (See Appendix A for letters of approval and research license.)

The Vice President of Aurora Campus, Mr. Jay Goman, was contacted by telephone in October of 1989 to discuss the feasibility of conducting an inservice workshop in February of 1990. Mr. Goman gave his verbal permission at this time. Following this, letters were then sent to both the President of Arctic College, Mr. Mark Cleveland and Mr. Goman, reviewing what had been discussed on the telephone and asking for letters of support. Mr. Cleveland gave his verbal approval in November, 1989, in a telephone call initiated by the researcher and in February, 1990, sent a letter of support. Mr. Goman's continued support was evidenced through subsequent telephone conversations.

Dates for the workshop were established in cooperation with the administration of the College. February 22 to 24, 1990 was felt to be the time most convenient for the instructors.

Sample Group

Of the twenty-one instructors at Aurora Campus, seven agreed to participate in this study. Participation, however, was limited to the first five volunteers. As their participation was voluntary, it was assumed that those educators who responded

affirmatively had an interest and a desire to improve their teaching effectiveness.

It was important and desirable to limit the number of workshop participants for many reasons. The first and most important reason was that in order for microteaching to be successful, it must be conducted in a group small enough so that everyone can participate in both the mini-lessons and in the feedback discussions. Secondly, this study occurred over a short time span and thus, the number of participants had to be limited. To be effective, it was imperative that the microteaching schedule allowed each participant to teach at least two mini-lessons. In this way, the participants had the opportunity to apply concepts discussed in the group session and also to integrate suggestions arising from the feedback after their first mini-lesson. Thirdly, in order for the feedback sessions to be beneficial to the participants, sufficient time had to be allotted for these sessions. During this workshop, the feedback sessions ranged in time from thirty to forty-five minutes for each mini-lesson that was presented. Finally, the small number of participants allowed the researcher to examine in depth, the impact that the microteaching workshop had on the participants' teaching knowledge, skills and attitudes.

The recruitment of these instructors was facilitated by the Vice-President of Aurora Campus. Mr. Goman discussed the nature and purpose of the study with his staff members in January of 1990. Letters from the researcher were then distributed, inviting each instructor to participate in a workshop which involved microteaching, peer feedback, and an interview. (See Appendix B for letter to participants.) The letter explained the nature of the workshop, the purpose of the study, and the time commitment involved.

Mr. Goman agreed to release the volunteers from their classroom responsibilities in order for them to participate in the

workshop. The interviews, however, were scheduled around the instructors' teaching and personal time schedules.

Included in this letter to the instructors was a short questionnaire designed to ascertain the teaching experience and the educational backgrounds of the volunteers. Demographic data of this nature were considered by the researcher to be relevant to the study as most adult educators come from fields other than education. As well, many adult educators have a specialization in the content they are teaching but they may have little or no training or prior experience with adult education theories, concepts, and methodologies.

For this study it was thus desirable that the experience and expertise of the participants vary greatly and range from preparation specific to adult education to no educational preparation at all. This reflected the diversity of the field of adult education, and made the sample group more representative of the entire population of adult educators.

The instructors who participated in the study were a heterogeneous group whose instructional experience ranged from eight months to eighteen years. The educational backgrounds of the participants was equally diverse. All the instructors had university degrees, and two had pursued post-graduate study. However, only one instructor had a degree in education. The other four instructors held degrees in other specializations.

Because the instructors taught different subjects to different classes, the microteaching sessions focused on teaching skills that could be applicable to most situations that involved adult learners. For example, no emphasis was placed on how to teach specific content; rather, discussions during the workshop focused on general characteristics of adult learners and a variety of teaching techniques that could be used to motivate and to foster learning in adult students.

Organization of the Workshop

The workshop was organized in two parts. Beginning the workshop was a short, half day seminar session which included brief presentations about topics and issues specific to the instruction of adults followed by group discussions. The second part of the workshop included the microteaching and the feedback sessions. Because the workshop was structured in this way, participants were first provided with information and knowledge about adult learner characteristics, as well as teaching skills and techniques. The microteaching sessions which followed then provided participants with the opportunity to apply this knowledge and to practice these skills. The workshop was conducted in a manner that required everyone to participate in the discussions and in the microteaching and feedback sessions. In this way participants were able to examine both teaching and learning in an experiential way.

To begin the first half day of the workshop, participants were given a description of the study as well as an overview of the purpose and rationale for using the microteaching technique. Following this presentation, participants' questions regarding the expectations, procedure and scheduling of the microteaching sessions were answered. The instructors then had the opportunity to select the order for the presentation of the mini-lessons.

For the remainder of this portion of the workshop, the participants discussed adult learner characteristics, motivation of adult learners and specific teaching techniques and methods. Objectives for this half day were as follows.

Participants will be able to:

1. To list characteristics of adult learners.
2. To describe ways to enhance motivation of adult learners.

3. To describe several teaching techniques that can be applied to situations involving adult learners.

Discussion on these topics was necessary, for in order for microteaching to be effective, participants must know what knowledge and skills they were expected to incorporate into their mini-lessons.

During this discussions it was stressed that as adults enter a learning situation they do so with varying backgrounds, experiences, and educations. Thus, it is essential that the learning be relevant, meaningful and build on past experiences. The importance of lesson introductions in fostering student motivation was discussed. To help foster motivation, lesson introductions should be relevant, enthusiastic, and provide the learner with a clear sense of direction and purpose. A third result of the discussions was the consensus that questioning is a teaching technique that is useful for encouraging student involvement, and enhancing student motivation.

Because of time constraints during the first part of the workshop, the objectives required the adult educators to use only low level cognitive skills such as describing and defining. During the microteaching sessions, however, participants were required to use the higher level cognitive skills of analysis and synthesis when they applied and practiced the concepts stated in the objectives. This expectation was communicated to the instructors during the introduction to the workshop.

The microteaching and feedback sessions were conducted over the next two days. Objectives for this part of the workshop were grouped into three areas:

1. Increased positive attitude demonstrated through increased confidence.
2. Application of knowledge and awareness of adult learning characteristics.

3. Application of teaching techniques appropriate for adult learners.

The workshop was organized as portrayed in Figure III-1.

Figure III-1 Workshop Schedule

Thursday February 22	
6:30 - 7:00 P.M.	Introductions Explanation of study and ethical considerations Consent form Explanation of microteaching
7:00 - 8:00	Adult Learner Characteristics (Seminar discussion)
8:00 - 8:30	Coffee
8:30 - 9:00	Enhancing Motivation (Seminar discussion)
9:00 - 9:30	Teaching Techniques (Seminar discussion)
Friday February 23	
8:45 - 9:15 A.M.	Coffee and preparation of video equipment
9:15 - 10:00	Participant #1 presents mini-lesson #1 (20 min.) Peer feedback and play back of video segments (25 min.)
10:00 - 10:30	Coffee
10:30 - 11:15	Participant #2 presents mini-lesson #1 Peer feedback and play back of video segments.
11:15 - 12:00	Participant #3 presents mini-lesson #1 Peer feedback and play back of video segments.
12:00 - 1:30	Lunch
1:30 - 2:15	Participant #4 presents mini-lesson #1 Peer feedback and play back of video segments.
2:15 - 2:30	Coffee

2:30 - 3:15	Participant #5 presents mini-lesson #1 Peer feed back and play back of video segments.
3:15 - 3:45	Wrap-up. Journal Entry #1

Saturday February 24

8:45 - 9:15 A.M.	Coffee and Preparation of video equipment
9:15 - 10:00	Participant #1 presents mini-lesson #2 (20 min.) Peer feedback and play back of video segments. (25 min.)
10:00 - 10:30	Coffee
10:30 - 11:15	Participant #2 presents mini-lesson #2 Peer feedback and play back of video segments.
11:15 - 12:00	Participant #3 presents mini-lesson #2 Peer feedback and play back of video segments.
12:00 - 1:30	Lunch
1:30 - 2:15	Participant #4 presents mini-lesson #2 Peer feedback and play back of video segments.
2:15 - 2:30	Coffee
2:30 - 3:15	Participant #5 presents mini-lesson #2 Peer feed back and play back of video segments.
3:15 - 3:45	Wrap-up. Journal Entry #2

Interviews were conducted with each participant during the fourth and fifth days. The purpose and scheduling of these interviews will be discussed in greater detail later in this chapter.

Implementation of the Workshop

Seminar Discussions

At the beginning of this portion of the workshop, it was explained to participants that an attempt would be made by the researcher to model those adult education principles that would

be discussed. The researcher did this by incorporating questioning, discussions, group and individual work, and brainstorming. Before each topic was introduced, all participants were encouraged to share their experiences and understanding of the topic. In this way, the researcher was able to ensure that content was relevant and at an appropriate level for the the learners.

Each seminar discussion began with a presentation by the workshop leader. These presentations included an introduction to the topic, a review of relevant literature, followed with handouts. Throughout the discussion sessions, participants were asked to relate the information to their own classroom situation. As a result, topics that were specific to each instructor's own experience arose during the seminar discussions. During the discussions, all participants were encouraged by the researcher to share their own opinions and experiences related to the topic. For instance, when discussing the motivation of adult learners, one instructor mentioned a difficulty she had been having with a particular group of students. The other instructors were then asked if any of them had encountered a similar difficulty. Those who had were asked to share with the group how they had resolved it. Those who had not experienced a similar situation were asked to suggest possible solutions and alternatives.

During this first half day of the workshop the purpose and the procedure for the microteaching sessions were discussed. Participants' questions regarding the content, length and scheduling of the lessons were answered. Content for the lessons came from each adult educator's own field of expertise. As the purpose of the study was to examine the impact that microteaching could have on increasing an instructor's teaching knowledge, skills and attitudes, it was felt that there was no need to dictate the content of the lessons. Initially, most instructors were apprehensive about teaching in front of their peers, and thus, providing latitude about the lesson content may

have helped to alleviate some of this apprehension. The participants negotiated the order of lesson presentation during this discussion about the content of the lessons. Twenty minutes was allotted as the maximum time for each presentation.

Microteaching Sessions

Microteaching occurred over two full days. This enabled each person to conduct two "mini-lessons" for their peers. It was intended that each participant incorporate into their mini-lesson the knowledge, skills and information that they had discussed during the half day seminar sessions. There was opportunity for a short discussion and peer feedback after each lesson.

The microteaching process employed during this portion of the workshop consisted of the following steps:

1. Copies of an observation comment form were distributed to the participants prior to the presentation of the first mini-lesson. This observation form was explained and discussed as it served as the basis for the feedback sessions. Instructors were thus alerted to which teaching behaviors and skills they should make note of during the feedback discussions.

2. Incorporating the knowledge, skills and information they received during the first half day discussion session, each participant planned and presented a twenty minute mini-lesson to their peers (the other participants in the workshop). These mini-lessons were recorded on video-tape.

It was anticipated that each mini-lesson would be twenty minutes in length. However, many were longer. In these instances, the researcher indicated through a pre-arranged hand signal to the presenter that the lesson had reached the twenty minute limit. This allowed instructors the opportunity to draw closure to the mini-lesson. On three occasions, however, it became necessary for the researcher to cut off the presentation.

3. Each participant received feedback about the lesson immediately following their presentation. This was verbal feedback from the workshop leader (the researcher) as well as from the participants' peers. Topics and criteria used for the feedback came from the notes participants had made on the observation comment form. The researcher began these feedback sessions with comments such as "What worked well in this lesson? What didn't work well?", or "Any comments for the presenter?" In this way, participants were encouraged to comment on each presenter's strengths and weaknesses.

4. An opportunity for review of segments of the taped lesson followed the feedback. Only those short segments that reinforced a comment or suggestion from the feedback were re-played. This was possible because while recording each mini-lesson the researcher noted on the comment sheet the numbers on the tape counter on the video machine.

5. After each participant had the opportunity to teach one mini-lesson, the process was repeated for the second mini-lesson. Each participant had the opportunity to utilize the information from the first feedback session to improve his/her next lesson.

Data Collection Instruments

As this research was concerned with examining in-depth, the knowledge, skills and attitudes of a small sample of adult educators, a variety of data were collected during the study. Three different methods of data collection were used: observations, interviews and journals.

Observations

Observations of individual and group verbal and non-verbal behaviors were made throughout the inservice workshop. The researcher recorded these observations in the form of field notes at the end of the first half day seminar session as well as during the two days of microteaching. Field notes made at the end of the first half day session included descriptions of the participants, the interactions that had occurred among participants as well as notes concerning the researcher's perceptions of the attitudes of the participants.

The notes made during the actual microteaching sessions served two purposes. They allowed the researcher to note specific behaviors and to record the tape counter numbers where they occurred. This facilitated a later verification of the observations. The second purpose served by the field notes was their use in the facilitation of the peer feedback and discussion sessions. The researcher was able to quickly jot down topics for discussion and include these in the field notes. At the end of each discussion, more notes were made regarding the quality, length and the general atmosphere of the feedback discussion.

The mini-lessons were recorded by the researcher on video-tape. This facilitated a later analysis of the participants' teaching skills and behaviors as well as verification of the observations noted during the actual presentation of the lessons. The procedure used to record the lessons was kept as simple as possible so that it would not interfere with the recording of field notes. The video tape machine and television monitor were set up at the back of the room so that the only operation required was to turn on the camera. Though the camera remained stationary, occasionally the researcher would use the zoom lens to capture or highlight a participant's movements and gestures. The monitor was turned away from the participants so that it did not interfere with the presentation of the mini-lessons.

Though the researcher kept the video-tapes of the lessons, duplicate copies were made available to those four instructors who wished to have a tape of their own mini-lessons. The duplicate tapes were made through the Faculty of Extension at the University of Alberta and then mailed to the participants one week after completion of the workshop.

Observation comment forms were filled out by all instructors after each mini-lesson presentation. This observation comment form was used by the workshop participants to record the observable behaviors and skills of each presenter. After the presentation of each mini-lesson the participants were given the opportunity to write down their observations about: increased confidence, the application of knowledge regarding adult learner characteristics and motivation of students, and the application of appropriate teaching techniques. Behaviors in these specific categories were directly related to the topics discussed during the first half day of the workshop and were also used by the researcher as indications of increases in the instructors' knowledge and skills. Two copies of each observation comment sheet were made; one copy was given to the presenter at the end of the feedback sessions and one copy was kept by the researcher for data analysis. (See Appendix C for the observation comment sheet.)

Triangulation was conducted using these three methods: observation forms, video tapes and field notes to support and ensure the accuracy of the observations made during the workshop.

Interviews

Interviews were conducted after completion of the microteaching sessions. Two interviews were scheduled for the last day of the workshop. One was held during the lunch break as that participant would not be available at another time and the second interview was held at the end of the last peer feedback

and discussion session. Both of these interviews were conducted at Arctic College, in the same room as the workshop had been held. Two interviews were scheduled for the following day, February 25. In these cases, the researcher went to the instructors' homes to conduct the interviews. The final interview was conducted two days after the workshop ended, February 26. This was held at Arctic College, in the instructor's office. Each of these interviews ranged in length from twenty-five to forty minutes, with the average time being thirty minutes.

The purpose of these interviews was not only to collect information from the adult educators about their own experiences during the workshop but also to explore any changes in their teaching skills, knowledge and attitude and the extent to which the changes may have been caused by the microteaching process. Participants were asked to describe any changes in their teaching behavior that may have occurred as a result of microteaching. The interview questions listed below, attempted to determine specifically what new knowledge and insights the instructors gained as a result of the microteaching and what future impact or change they felt this experience might have on their own teaching.

Interview questions:

1. Describe your experiences during the microteaching workshop.

2. To what extent do you feel these experiences caused any changes in your:
   a). knowledge about teaching techniques and adult learning theory,
   b). attitude towards teaching adults,
   c). your skill and ability to teach adults.

3. In what way do you feel this experience can be of benefit to you as an instructor?

As it was assumed that an increase in knowledge and skills leads to a more positive and professional attitude about teaching adults, the interviews also attempted to determine whether the instructors felt they had experienced a change in their understanding and their awareness regarding adult learners and their own teaching abilities. (See Appendix D for interview objectives and questions.)

Journals

Participants were asked to respond to one journal question a week for one month following the workshop. The questions and the dates for responses were given to each instructor after the interviews. These journal responses provided a written record of changes in the participants' insights, attitudes and behaviors regarding their teaching. An opportunity to respond to the first two questions was provided during the workshop. Time was made available at the end of each day for the workshop participants to respond in writing to a specific question. In this way, all participants had the opportunity to become familiar with the process of journal writing. Participants were asked to respond to the remaining three questions at specific times throughout the next month.

Journal keeping was encouraged through letters sent to each instructor. In these follow-up letters, participants were thanked for their participation in the study and were reminded about the value and importance of their comments for this research.

The researcher requested that participants mail their responses only once, after they had all been completed. It was explained that by doing so, instructors could then add to and elaborate on a previous response. At the end of the month, the researcher telephoned the instructors to remind those who had not yet sent in their journal responses that it was important that they do so. As it was not possible to speak with each adult

educator because of varying teaching schedules, messages were left and follow-up calls were made throughout the next week. After six weeks, all instructors had been contacted and all journal responses had been received. (See Appendix E for journal questions.)

Pilot Test of Instruments

The interview questions were pilot tested using a group of vocational instructors who had participated in microteaching as a part of their undergraduate educational program at the University of Alberta during September and October of 1988. The observation form was also pilot tested using video-tapes made with the same group of instructors. The actual microteaching process was not pilot tested as the researcher was familiar and comfortable with the process.

As a result of the pilot test, interview questions were re-phrased so that they included explanations of confusing phrases. The questions were also broken down into shorter, more specific questions that required detailed responses from the interviewee. Also, as a result of the pilot test, the observation comment form was altered so that it included a "not observed" category for the behaviors listed on the form.

Data Collection and Analysis

The research question 'When used as a means of inservice training, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?" was answered by examining three areas (categories) of change in instructors. These areas--self-confidence, attitudes toward teaching, and the application of appropriate teaching techniques-

-were seen as indications of change in the instructors' knowledge, attitudes and skills.

Area one, the self-confidence of the adult educators, looked at data collected through two methods. The first method examined the instructors' responses to interview questions. One question asked the educators to describe their experiences during the workshop. A second interview question asked participants to describe any changes in their teaching skills and ability that the microteaching experience may have caused. It was felt that after viewing themselves on video-tape and listening to feedback, the concept and image that the instructors had of themselves as teachers might have changed. The researcher felt that such changes would be valuable to explore.

The second source of data used to determine changes in instructors' self-confidence was the observation forms which were completed after each mini-lesson. The researcher analyzed these, looking for increased confidence demonstrated by behaviors as noted on the observation comment form. Some specific behaviors listed on this form were: eye contact, a relaxed and conversational speaking voice, enthusiastic delivery, and the avoidance of distracting mannerisms. These behaviors were included on the observation comment form in order to facilitate an analysis of whether a change in the instructors' levels of self confidence became evident in their observable teaching behaviors.

Figure III-2 gives a brief overview of the sources of data that were used to examine and analyze the three categories of instructor change.

Figure III-2 Categories for Data Analysis

RESEARCH AREAS	SOURCE OF DATA		
	Interview	Observation Form	Journal
Self Confidence	Describe your experiences during the workshop. In what ways do you feel these experiences caused any changes in your skill and ability to teach adults?	Enthusiasm Relaxed conversational tone Eye contact Distracting mannerisms	
Attitudes toward teaching	In what ways do you feel these experience caused any changes in your attitude toward teaching adults? In what ways do you feel this experience can be of benefit to you as an instructor?		In what ways do you feel that the perceptions that you formed of your teaching effectiveness during the workshop has affected your performance in your classroom during the past week?
Teaching Techniques	In what ways do yoy feel these experiences caused any changes in your skill and ability to teach adults?	Stated the objectives and their importance. Made the learning relevant and meaningful to the learners. Encouraged students to ask questions and express ideas. Used a suitable technique for presentation.	What are two new ideas (techniques) that were discussed during the workshop that you feel you might be able to apply in your classrooms?

The second category, instructors' attitudes about teaching, examined data collected during the interview and in the participants' written journal responses. Interview questions first asked instructors to identify any attitudinal changes regarding the instruction of adults that they had experienced during the workshop. Another interview question attempted to determine in what ways the instructors felt the microteaching experience could benefit them as educators. This question was felt to be relevant as a desire to improve as an educator was considered by the researcher to be indicative of a positive attitude regarding teaching.

The journal question asked participants to reflect on their microteaching experiences and to look critically at any impact these experiences might have had on their classroom performance. Self evaluation is an area where changes in instructors attitudes might become evident.

The application of new teaching techniques, the third area of research, looked at data collected through interview questions, the observation forms, and through an analysis of the participants' journals.

During the interviews, instructors were asked to describe any changes in their teaching skill and ability as well as any new teaching techniques they had learned as a result of the workshop. The observation comment forms that were filled out after each instructor's two mini-lessons were compared by the researcher in a later analysis in order to determine whether the instructors were actually able to implement any new teaching techniques or suggestions that were made during the discussion after presentation of their first mini-lessons. And, in order to determine whether the microteaching workshop had provided the instructors with new techniques that they could use later, the instructors were asked to identify through a journal response which teaching techniques they thought they would able to implement successfully in their own classrooms.

Conclusion

This chapter described the methodology used to collect data in this study about the effectiveness of microteaching as a technique for inservice education. The research incorporated the microteaching technique in a two and one half day inservice workshop for adult educators. Qualitative data regarding the microteaching experiences of the participants were collected throughout the workshop using observation, interviews, and participants' journal entries.

The findings that were reached through analysis of the data are discussed in detail in the next chapter. These findings are used as an example of the effects microteaching can have for improving the effectiveness of adult educators.

CHAPTER FOUR
Findings Of The Study

Introduction

This chapter discusses the analysis and the findings of the data. In the first section, three means of research observations are presented. Interviews are discussed in the next section and the journal entries made by participants, during and after the microteπaching, are addressed in the last section.

Observations

The findings outlined in this section are based on the researcher's field notes made during the workshop, analysis of the video taped mini-lessons, and the written comments from participants' observation forms.

Field Notes

Throughout the workshop the researcher recorded in narrative format, observations about the teaching behavior of the participants as well as about the interaction and discussion among participants. Based on these observations it was found that the microteaching process had an immediate and noticeable impact on increasing positive attitudes among the participants. Examples include the increased willingness of the participants to share and accept constructive criticism, the increased rapport among participants, and the increase in participants' self-confidence.

The most pronounced area of attitudinal change was the instructors' increased self-confidence. This was evidenced during the second mini-lesson presentations. The video-tapes of the mini-lessons provided the researcher with a means of verifying this observation regarding the increase in the instructors' confidence. After comparing each instructor's two mini-lessons, increased confidence in the presentation of the second lesson was made evident in the following instructor behaviors:

-lesson introductions were clearer and more enthusiastic
-presentation of the lesson content was more relaxed and easier to understand
-instructors used more movements and gestures during their lessons.

Another observation that indicated change in the instructors' self-confidence and attitude was their response to the discussion and to the feedback and the suggestions of their peers. At the beginning of the workshop, during the first half day discussion session, it became apparent that the instructors, though they were eager to participate, were not yet ready to accept suggestions or to admit that there could be effective teaching methods and techniques different from the ones they had been using. This was evidenced through phrases such as: " Yes, but in my classroom. . . ," "What I do is. . . ," and "That doesn't work with my students because. . . ." In these cases, the researcher accepted all comments as valid and explained that there could be an infinite number of approaches and that no approach or technique was incorrect, but that there may be some that are more appropriate or effective than others. This defensive attitude extended through the presentation of the first mini-lessons. Feedback given during these sessions was often met with defensive comments such as those noted during the first

half day session. As a result, much of the discussion tended to focus on specific teaching and classroom situations, rather than on teaching techniques or adult learning characteristics.

As the workshop progressed, the researcher observed the development of a relaxed and supportive atmosphere. Included in the field notes that were made after the first half day of the workshop was the observation that the participants were not yet a group. They were five individuals who did not seem willing to share and accept ideas, resources and expertise. However, by the end of the first full day of microteaching, professional networking and sharing of instructional and personal resources occurred with increasing frequency and even extended through coffee and lunch breaks. For example, during the first coffee break and during lunch, the participants did not sit together. They sat at other tables, with other instructors who were not in the workshop, or they did not come to the cafeteria at all. This had changed by the end of the day, when participants all sat together at coffee and continued the type of discussion they had been engaged in prior to the break. During these discussions, it became very common for an instructor to ask the group for suggestions and advice pertaining to a specific situation they had encountered, or were encountering in their classrooms. In one instance, during a feedback discussion, an instructor shared a difficulty he had been having with a student whose motivation had declined and whose attitude had become disruptive and confrontational. The instructor asked the other participants: "Is there anything else I could have done? How can I stop this from happening again?" These questions initiated a discussion that continued throughout the coffee break and even extended into the feedback session that followed the next mini-lesson. As the workshop progressed, it also became more difficult to draw closure on the feedback discussions, as the participants began to be more specific and constructive in their comments.

Video Tapes

Each mini-lesson was video taped in order to facilitate a later analysis of the participants teaching skills as well as verification of the researcher's observations recorded as field notes.

This review of the video tapes highlighted another change in instructor behavior. As the adult educators developed more self-confidence they began to demonstrate a willingness to implement new teaching skills and techniques. In their second mini-lesson, each instructor made some attempt to incorporate comments and suggestions from the feedback session which followed their first presentation. Following feedback that they should vary their lesson delivery in order to make the lessons more interesting, two instructors tried different techniques such as discussion and questioning. One instructor had received feedback that she needed to project more enthusiasm and excitement into her lessons. A suggestion had been made that she vary her voice and use more expressive gestures and movements. During the second mini-lesson this instructor stood rather than remained seated and used more questioning in her lessons. Other instructors made attempts at ensuring the lesson was relevant to the needs and experiences of the students by including in the introduction to their second mini-lesson, a review of the lesson objectives as well as an explanation of how the lesson would tie in with previous lessons.

Observation Comment Forms

The observation comment form was used by all participants to record the observable skills and behaviors of each presenter. These observations included categories such as self-confidence, knowledge of adult learner characteristics, motivation of adult learners and teaching techniques.

Of the three sources of observation data--researcher notes, video tapes and observation forms--the observation forms were

the most limited source of data. Comments made by the participants were brief, and often incomplete. The most probable reason for this was the limited time allotted for completion of the forms. Comments on all the observation forms were predominantly positive and did not include many of the constructive and critical comments that were made during the verbal feedback sessions. Reasons for this may be that the participants felt uncomfortable putting constructive criticism in writing and thus preferred to share verbal rather than written feedback.

In spite of these limitations, however, there were written comments made by the participants that were useful in confirming the researcher's observations. These comments included: "confidence shown in relaxed tone," "manner and delivery exuded confidence," "lecture and question style good for the topic and for making adults feel like important participants," and "described procedure in simple language, not too overwhelming."

These attitudinal changes in the instructors--increased self-confidence, the establishment of professional collegiality, and the willingness to try new techniques--were confirmed in the interviews that were conducted with each participant. In addition to confirming the observations, the interview questions also attempted to establish the extent of changes in instructors' knowledge and teaching skills

Interviews

The purpose of the interviews was to discuss and explore with the participants, any changes in their teaching skills, knowledge and attitudes that the microteaching process may have caused.

These interviews with the workshop participants revealed that they felt they already had a good understanding and

awareness of the characteristics of adult learners. What may be inferred from this is that knowledge about adult learning principles and theory was not perceived by the instructors to be a high priority need and that they had other needs which were more immediate.

Two of the five instructors had already explored adult learner characteristics through independent reading; others felt confident that their knowledge in this area was sufficient to meet their current teaching needs. Even though comments such as, "I've always enjoyed teaching adults . . . I don't know if I need to change anything there" were made, the instructors did feel that they gained some new insights and a greater understanding about their relationships with their students. Three of the participants specified areas that they felt they could improve in. These areas included: making more effort to provide adult learners with choices as to how they would like to learn, ensuring that content was at a level appropriate for the learner and increasing the amount of useful feedback and positive reinforcement.

As noted in the researcher's observations and verified through the interviews, the microteaching workshop had the greatest impact on changing instructors' attitudes about teaching. These changes included increased self-confidence and increased collegiality.

Most instructors, perhaps as a result of their lack of experience and training, did not have positive images and concepts of themselves as educators. As all the instructors had had extremely little or no feedback from supervisors, they were unable to accurately gauge their teaching effectiveness, and thus, most tended to underestimate their ability. Comments made by participants that reflect this include: "I don't tend to think of myself as a good instructor," and "Sometimes I'd feel a bit uncertain about my own abilities to teach." The workshop provided them with both the opportunity to see themselves teach and the opportunity for peer feedback. As a result of this

process, the instructors felt more confident about their abilities and reassured that they could continue to grow and develop as educators. This was illustrated by remarks such as: "It makes you feel good to know you are doing something right" and "Now I know I wasn't that bad at all."

Another example of the instructor's attitudinal change was the increase in collegiality among participants. Aurora Campus is relatively new in Inuvik and has experienced very rapid growth since its inception five years ago. As a result, the campus is experiencing "growing pains" which were evident in the initial lack of unity and cohesiveness among those staff members that participated in the workshop. Because the workshop environment was non-threatening, and the group of participants small, a positive atmosphere of encouragement and sharing developed. As mentioned earlier, it became increasingly difficult to draw closure on feedback discussions, as participants began more frequently to seek additional critical comments from peers and to brainstorm ideas and solutions for classroom problems. The instructors felt that they had benefitted and would continue to benefit from the collegial team-building that had occurred during the workshop. "It's going to be easier to go and ask those same people for help," and "It reminded us that there is something we can do as a team here" are comments that reflect the desire to maintain a collegial atmosphere.

When asked to describe any new teaching techniques or strategies that they had learned, participants were not able to be specific in their answers. The instructors felt that they learned and benefitted from the microteaching experience, but were not able to describe exactly what new skills and techniques they had learned. "It's really hard to say what I learned because I learned constantly, every time someone said something." There was a consensus among the participants that they had gained from the opportunity to observe other instructors' teaching techniques and strategies. "It's the first time I've ever been involved and

actually participated (in) critically watching other people, so I felt I was being given a smorgasbord of what options are available."

Later, in a journal entry, this participant elaborated further on the "smorgasboard" of available options. "There were a number of techniques that the other instructors used that I am going to try and apply in my own classroom . . . Firstly, I am going to write down and discuss a lesson outline at the beginning of the lesson and refer to it during the lesson . . . Secondly, I liked the interactive approach (involving the student in the lesson by asking questions)."

As illustrated in the above examples, the instructors were not able to put specific titles on the teaching techniques that they had learned. However, three instructors did say that they were willing to try some new strategies in their own classrooms. "I'm feeling more confident I could be a lot more experimental." "My organization of a lecture to teach a small group--I haven't improved over the last two days, but I have the basis with which to work." This same instructor also later identified in a journal entry, ways in which she attempted to apply new ideas and techniques. These included: "bring in more student participation," "follow oral instructions with written ones," and "to put more enthusiasm and variety in my voice."

An additional theme became evident throughout all five interviews. This was the willingness of the participants to learn and develop professionally. This interest in professional growth was anticipated by the researcher as mentioned in Chapter 3, but the depth of this interest deserves additional mention. Comments made by the participants during the interview include: "What I also got out of it (the workshop) is how I can be more of an instructor," "In teaching, it's not just a matter of knowing the content or knowing your subject, there's more to it," and "My objectives and goals are to improve my teaching techniques so that I can be good at what I'm doing."

As the workshop progressed, participants expressed their desire to improve their teaching skills more often. This may not be an indication of an attitudinal change as the participant's initial levels of interest in instructional improvement is not known. It is interesting to note, however, that the adult educators expressed this desire more frequently as their self-confidence increased.

Journal Questions

In addition to participating in microteaching and interviews, the instructors were also asked to respond to journal questions at specific times for one month following the workshop. For clarity, the analysis of the journal responses have been grouped into four topics: teaching strengths and weaknesses, microteaching and teaching performance, professional collegiality and teaching techniques.

Teaching Strengths and Weaknesses

The first journal question asked participants to identify what they perceived to be their own teaching strengths and weaknesses. The researcher then grouped these into three categories: personal characteristics, teaching techniques and style, and acknowledgement of adult learning characteristics.

The first category, personal characteristics, included knowledge of the subject, love of teaching and self-confidence. Strengths identified in the second category of teaching technique and style included the ability to manage discussions, varying the pace of the lessons and presenting material in a variety of ways. The third category, knowledge of adult learner characteristics, included the ability to create a relaxed environment, the ability to match lesson content with students' needs and levels of understanding, and the ability to encourage student participation.

Two participants did not feel that they had any teaching weaknesses. As these instructors had more teaching experience than did the others, this could be an indication that the microteaching process used in this workshop was not as rigorous and demanding for these participants as it was for those with less experience. The three instructors who did identify weaknesses identified things such as: forgetting the level of the students, time-management, a too-serious approach, an even-keeled delivery, nervous mannerisms, lack of clear transitions between ideas, and difficulty in explaining new concepts. These comments illustrate that the microteaching process was effective in enabling participants to critically look at, and evaluate, their own teaching performance.

Microteaching and Teaching Performance

When asked to reflect on the impact that microteaching had on their teaching performance, the majority of the instructors made comments which illustrated the changes in self-confidence and the development of professional attitudes that were observed by the researcher and also discussed during the interviews. Some comments that illustrate this include: "I have had a great deal more confidence", "I had a greater sense of responsibility to my students . . . to be the best instructor that I could be" and, "it makes me feel more confident about my abilities and as a consequence, it will relax me in class." Instructors explained that this new awareness caused changes in their classroom behavior. Three participants said that they were able to relax and laugh, and also to acknowledge more of the students jokes. "I felt freer to relax and go with a joke."

Two participants said that their teaching behaviors had not been affected as a result of the workshop. It is encouraging, however, that while both instructors had commented that although the workshop had not impacted their external behaviors, it did impact on more internal behaviors such as their awareness

and their attitude. In week two of journal keeping, these instructors made the following comments: "It helped to reinforce what I was aware of about my teaching ability." and "It has made me stop and think of what I am doing and where I might be leading the learners."

Professional Collegiality

As part of their journal entries, participants were encouraged to comment about the value of professional collegiality. One participant commented on the continued collegiality among workshop participants. "It has helped to increase collegiality at the campus amongst (those) who were at the workshop. There is much more helping and sharing happening now than before." Another instructor commented "It helped to build confidence in those instructors teaching for the first time." One of the instructors who had limited teaching experience and suffered from low self-confidence explained how increased collegiality caused a personal attitudinal change. "Now I feel as if I have a group of people upon which I can rely to help me with solutions to any difficulty, or at the very least sit down and discuss options. I realize that it is not a confrontational situation, but a learning experience. We can all learn from other instructors' accomplishments." Another instructor, who also experienced an increase in self-confidence, describes an increase in knowledge and skills resulting from professional collegiality and sharing. "I found the workshop valuable for the opportunity I had to discuss common problems and solutions with other instructors. (It) provided a very effective vehicle for sharing ideas."

Teaching Techniques

Early in their journal writing, participants were asked to identify new teaching techniques or strategies that they felt they might be able to implement in their own classrooms. Four weeks later they were asked to evaluate how successful they perceived themselves to be in those attempts. The ideas and techniques that participants selected to incorporate into their classroom teaching included: introducing the lesson, establishing a positive relaxed atmosphere, getting rid of annoying mannerisms, projecting more enthusiasm in the subject, building student interaction, using a lesson outline, stating the objectives for the lesson and determining students learning styles.

Two instructors noted that they had learned no new techniques which they could incorporate into their teaching and thus were not able to evaluate their attempts. However, one of these two instructors commented that "Today's discussions reminded me that teaching strategies should be used according to the needs of the students." This type of comment illustrated the value that inservice education has for reinforcing concepts already learned.

The three participants who had identified techniques had all managed to incorporate one of more of these into their lessons. Of these, two felt that they had been successful in their attempts to incorporate change and new ideas. Only three of the changes identified by the participants were not successful, and of these, one participant identified an alternative that worked. The other two participants acknowledged the value of the techniques and stated they they would continue to work on adapting their approach until they could feel more comfortable and successful in implementation.

One instructor felt she had implemented a number of changes successfully and explained that as a result, she was "teaching the material effectively instead of 'getting through' the

material, which is what I think was my focus prior to the workshop." This instructor felt confident in her success in teaching "effectively" as "several students remarked that they were finding the classes easier, more fun, and practical."

Another instructor had identified that he was going to attempt to explain, to the students, the objectives for each lesson. When evaluating his success at implementing this change into his lessons, the instructor stated, "I think I have been successful at implementing this. This makes me focus on the lesson and gives the students a bit of a framework for understanding the material."

From these responses, it appears the the microteaching process is limited in its effectiveness in providing adult educators with concrete and practical techniques that they can utilize in their classrooms. It is, however, important to note that in spite of this limitation, instructors were able to evaluate their success, modify and even identify other techniques they could implement. This can be seen as an indication that the participants were becoming more aware of their own teaching performance and that several were willing to try new ideas.

Summary

This research looked at the question, "When used as a means of inservice education, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?" Findings of this study indicate that, due largely to the high level of peer interaction, the microteaching process can have a positive impact on the development and increase of a positive attitude within adult educators, on the enhancement of their existing teaching skills, and on the establishment of collegiality and rapport among the educators.

The frequency of positive responses about changes in their self-confidence indicate that this is the area where instructors were most affected as a result of microteaching. The increased collegiality demonstrated in this workshop is an interesting result of the microteaching as it can also be indicative of a more positive and professional attitude towards teaching. This collegiality may be a result of the increased self-confidence of the instructors since it was only after the instructors had developed more confidence in their own teaching that they felt able to develop a professional rapport with their peers.

Increases in teaching knowledge as a result of the microteaching process cannot be determined through this study. Instructors felt they already possessed adequate knowledge and understanding of adult learner characteristics. There was not substantial indication that it is an effective process for mastering skills and techniques which are completely new to the instructors. When questioned about any new teaching techniques or strategies that they had learned, all instructors felt that what they had gained in this area, as a result of the microteaching process, was a new awareness of alternative strategies and techniques.

Conclusion

All instructors, regardless of the extent of their experience, benefitted from the opportunity to explore and build upon their own teaching abilities. Analysis of the observations made during the workshop, interviews with participants, and participant's journals indicate that the microteaching process is effective at increasing the instructor's self-confidence as well as increasing their existing awareness and understanding of their own teaching skills and abilities. These increases can be attributed to the high level of peer interaction and feedback. The

peer interaction focused on refining and expanding the teaching skills and behaviors that the participants had observed together. Instructors were able to share experience, expertise, ideas and suggestions. When asked to describe what they had learned during the workshop, two participants replied, "I learned constantly, every time someone said something . . . add that into your own knowledge base, assimilate it however."

The next chapter will discuss the conclusions that can be drawn from these findings as well as the implications that the conclusions can have. Recommendations for future study will also be included in Chapter Five.

CHAPTER FIVE
Conclusions, Implications and Recommendations

Introduction

This chapter summarizes the study and the findings, and then presents conclusions made by the researcher. Following each conclusion is a brief discussion of the implications they might have for those involved in the field of adult education. Recommendations for future and further research conclude the chapter.

The Study

This research incorporated the microteaching technique in an inservice workshop for adult educators. The educators who participated in this workshop were instructors at Arctic College, Aurora Campus, in Inuvik, Northwest Territories. Data collected throughout the workshop were analyzed in order to answer the research question "When used as a means of inservice education, what impact does the microteaching process have on the knowledge, skills and attitudes of adult educators?"

The recruitment of participants for the study was facilitated by the Vice-President of Aurora Campus. Letters from the researcher were distributed by the Vice-President, inviting each instructor to participate in a workshop which involved microteaching. Five instructors were selected to participate in the study.

The workshop was divided into two parts. During the first half day, the participants discussed adult learner characteristics, motivation of adult learners and teaching techniques and methods. This provided participants the opportunity to share experiences and knowledge and, just as importantly, it provided them an opportunity to establish rapport as a group. Microteaching occurred over the next two days. Each person conducted two "mini-lessons" for their peers. There was an opportunity for discussion and peer feedback after each lesson.

Data were collected through observations, interviews, and participants journals. The researcher's field notes, video tapes and observation comment forms were the three methods used to gather observational data. Observations were made throughout the workshop in order to note any instructor behaviors that could be seen as indicative of:

1. increased confidence
2. the application of knowledge regarding adult learner characteristics
3. application of appropriate teaching techniques.

Interviews were conducted after the completion of the microteaching sessions to discuss the participants experiences during the workshop. The interview focused on three main areas:

1. new knowledge and insights the instructors gained as a result of the microteaching
2. how the instructors felt they may be able to benefit from this new knowledge
3. how they might apply it in their own classrooms.

During the month following the workshop, participants were asked to respond to journal questions. These questions encouraged the instructors to reflect on their own teaching and to

note any changes they may have implemented as a result of the microteaching experience.

Summary of Findings

As discussed in the previous chapter, when used as inservice education for adult educators, microteaching can be an effective means of inservice education for the following reasons. The findings show that microteaching builds rapport and collegiality among staff. Development of a stronger awareness and understanding of adult learner characteristics is another result of microteaching. Also shown in the findings, is the increase in the instructors' confidence in their own teaching abilities. There was however, no indication in the findings that microteaching is an effective means of providing instructors with new teaching skills and techniques.

Based on these findings, the researcher was able to draw four conclusions which will be discussed in the following paragraphs.

Conclusion #1

Microteaching alone cannot meet all the inservice education needs of instructors. As indicated in the literature, staff development and inservice education must be part of a continuing process, one that meets the needs of the instructors. Because inservice education is a continuous process, it should consist of a variety of techniques and approaches in order that it meet the needs of as many instructors as possible.

Joyce and Showers (1980) have stated: "A realistic goal of inservice education should be refinement of existing skills and not acquisition of new skills. There should be follow up and

evaluation as well as frequent feedback" (p. 380). To be effective in improving teaching skills and techniques, microteaching would have to be implemented over a period of time longer than two and one half days as in this workshop. This is illustrated by the finding that, as it was implemented in this study, there were no indications that microteaching is an effective means of providing instructors with new teaching skills or techniques that they can utilize in their own classrooms. The time restriction imposed by a two and a half day workshop limited the amount of time in which participants could practise new teaching skills. Nor was any provision made for follow-up microteaching sessions and thus, instructors did not receive feedback regarding any continued improvement of their existing teaching skills and techniques. New teaching skills and techniques should be demonstrated or explained to the participants and then sufficient time allotted for practise. Follow-up sessions that include feedback and evaluation are also necessary before instructors can successfully implement new teaching techniques.

Microteaching should not be relied upon as a sole means of inservice education for adult instructors. It could, however, be used very effectively in conjunction with other means of professional development. To be most effective, microteaching should be part of a longer process of inservice education which utilizes a variety of techniques such as: independent readings, seminars, guest speakers, and presentations. Microteaching could then be used as a means of applying, practising and refining new concepts learned through these other methods of inservice education.

Implications

Too often inservice education is viewed as a "one time only" event. Because of this, inservice education tends to become reactive rather than proactive in nature. In other words, inservice education is viewed more often as a solution for, rather

than a means of preventing, the need for professional development and education. Also, many post secondary institutions which are dedicated to providing education often fail to provide inservice education to their own staff members. This creates a contradictory message that is sent from administration to staff members, and this contradictory message becomes evident by lack of cohesion and collegiality among the instructors.

The establishment of a continuous process of inservice education and the inclusion of microteaching into that process can have special significance for institutions. A proactive approach to inservice education might prove to be cost and time efficient as the professional development needs of instructors are anticipated and met before they become serious deficiencies.

Conclusion #2

The high levels of peer interaction required for microteaching can help to build professional rapport among participants and this in turn can lead to a more positive and professional attitude among the adult educators. It should be noted that in order to achieve this, peer interaction and sharing must occur in a safe, non-threatening environment. Microteaching requires that participants take a risk and make themselves vulnerable to critique and assessment. A situation involving risk can help to foster an attitude of trust and respect among the participants and this, in turn, may develop a foundation for increasing collegiality. Because microteaching involves risk taking, and, as all instructors in this study had taken the same risk--teaching to their peers-- an atmosphere of mutual trust and respect developed among the participants.

As implemented in this study, microteaching relied heavily on constructive criticism and the sharing of personal and

professional resources. The researcher helped facilitate the development and maintenance of a positive, trusting atmosphere, where all comments were accepted. This was accomplished by allowing only those participating in the workshop to observe the microteaching sessions and the video tapes. Participants were encouraged to make comments that were constructive and supportive rather than personal and negative.

It is indicated in the review of relevant literature that, when used as a teacher education technique, microteaching increases both collegiality and communication among peers. As Weil and Joyce (1978) state, "peer teaching gets people working together to improve their classroom performance. It increases dialogue about the dynamics of teaching, . . . and provides a warm and enriching experience in itself" (pp. 19-20). This supports the conclusion that the increase in collegiality caused by microteaching also leads to an increased positive and professional attitude among instructors.

Implications

This increase in collegiality has implications for post secondary institutions. A workshop utilizing microteaching can promote unity and collegiality among new and continuing staff members who are just beginning to work together. Institutions may find that staff morale is raised and that their existing resources are enhanced when instructional staff begin collegial networking and sharing of professional resources.

This can be of special significance for institutions in isolated locations such as Arctic College. Often, these institutions look outside for expertise that exists within, whereas utilization of existing resources is a more cost efficient means of providing inservice training. For example, isolated institutions may feel that the only means of providing inservice education is to bring in an outside resource person for a short workshop. This can be very costly, and often the return on the

cost is not high, unless the resource person or the institution has made provisions for the establishment of a resource and support network. However, if microteaching sessions were held at such an institution, the collegiality among staff increases and the beginnings of an "in-house" resource and support network are established.

Collegial networking may also lead to increased job satisfaction. Providing an opportunity for instructors to share professional resources through inservice education is a means for an institution to recognize the achievements and expertise of staff members. By acknowledging the expertise of its staff, an institution is supporting them in their professional development needs and goals. Instructors teaching in an environment that is supportive and accepting may find that their enjoyment on the job has increased.

Conclusion #3

Microteaching provides the combination of practise, theory and feedback necessary for refinement of instructors' knowledge, skills and attitudes that can lead to increased teaching effectiveness.

As indicated in the review of the literature, effective teaching is achieved through a process that involves the combination and refinement of a teacher's attitudes, knowledge and skills. The literature also suggests that theory, practise and feedback, when combined, are essential ingredients of inservice education.

Microteaching, as it was implemented in this workshop, provided this combination of theory, practise and feedback. And, as shown through the experiences of the participants in this study, microteaching allows instructors to participate in a process that involves the refinement of a teacher's attitudes,

knowledge and skills. During the microteaching workshop, participants had the opportunity to watch themselves and others teach, and then to re-teach the lesson, incorporating the concepts and ideas arising from the feedback. This experience proved to be effective as the instructors were required to critically assess and to evaluate application of adult teaching/learning theory. In spite of the fact that all five participants felt they had a good understanding of adult learners, they were able to gain a greater, more in-depth, understanding as a result of teaching to and being taught by peers.

Implications

A microteaching workshop could prove to be very beneficial for those people who are experts in their own fields, but who have no education background. It could also prove to be beneficial for those educators who have had no experience teaching adults. Microteaching could also be a useful means of updating all instructors, regardless of their education and experience, in any new developments in the adult education discipline.

A workshop which included microteaching could provide instructors such as these with knowledge about teaching theories and teaching techniques. Microteaching could also provide those instructors with an opportunity to practise and refine their skills and then provide them with feedback regarding their progress.

It should be noted however, that to be most effective, microteaching should be part of a larger and continuous system of inservice training as explained in Conclusion #1.

Conclusion #4

Microteaching provides an opportunity to be evaluated and assessed as well as to evaluate and assess others and this can help to develop an instructor's self

evaluation and assessment skills. Instructors must have some background knowledge and understanding of teaching theories and techniques before they can accurately assess their own teaching performance. Microteaching can provide instructors with some of this background. "Often when you are in the role of student you see things that you do not see when you are in the role of teacher. Thus, you can avail yourselves of anothers' professional opinion and coaching" (Weil & Joyce , 1978, p. 20).

Implications

This conclusion could prove to be of value for those institutions which have not established a continuous process for inservice education. Microteaching could at least provide instructors with some self evaluation skills that they could use to continue to improve their teaching ability.

Increasing instructors' self evaluation and assessment skills could also prove to be beneficial for those institutions which have not established a system for staff performance appraisals. Instructors who have never had their teaching performance evaluated have no means of knowing what their own teaching strengths and weaknesses are, and thus they do not have an understanding of how they can improve. Microteaching sessions could provide these educators with an opportunity for peer and self evaluation which, in turn, could provide them with a clearer picture about their own teaching skills.

Areas for Further Research

This research has established that microteaching is effective in causing change in the attitudes of adult educators. The participants in this study demonstrated increased self-confidence and increased collegiality, but it is beyond the scope of this study to determine the extent and duration of this

attitudinal change. Further research, such as a longitudinal study, is required before it is possible to state conclusively that microteaching causes a lasting change in the attitudes of instructors.

While the instructors were representative of the instructors at Aurora Campus, they may not be representative of the whole population of adult educators. As well, the number of participants in this study can limit the generalizability of the findings. Because of these factors, it would now be useful to repeat the study using a larger, more random sample of instructors.

Another possible topic for study would be to examine some of the cultural differences, problems, and challenges that may arise when microteaching is used in a cross-cultural setting such as the one at Aurora Campus. This research did not address any of these issues and it may be of value to do so at a later date. For example, it could be useful to determine whether or not microteaching is effective when used as a method of preparation for teachers entering a cross-cultural classroom for the first time.

Another topic for study would be to research, more fully, the effect and value that peer feedback and evaluation have for increasing collegiality among instructors. This could be done utilizing the microteaching process, but eliminating the video feedback and thus, placing the emphasis on peer feedback.

Future research should also be conducted to determine if, indeed, microteaching is more effective when used as one component of a larger and continuing inservice education process. This type of study would compare two similar inservice education programs, one that employs microteaching and one that does not.

Concluding Comments

As illustrated by this research, microteaching can be an effective inservice technique when used in a positive, non-threatening environment. It is especially effective at building collegiality and rapport among instructors. Both experienced and novice adult educators benefit from the opportunity to build resources and networks with their colleagues.

It was also demonstrated through this research that, to be most effective, inservice education must be a continuous process that meets instructors' needs, builds in collegial networks and provides for ample, non-threatening feedback. Inservice education must also develop within the instructors self-evaluation and assessment skills. It is only through critical thinking processes that an instructor develops the personal tools needed for personal professional development.

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APPENDIX A

November 15, 1989

Jay Goman
Vice-President
Aurora Campus
Inuvik, NWT

Dear Jay:

This letter is a follow-up to our telephone conversation in early October. As I mentioned, I am interested in conducting a professional development workshop for instructors at Aurora Campus as part of the research for my master's thesis. I have written to Mr. Cleveland asking him for his endorsement of the project and have requested that he send you a letter indicating his approval.

I would like to have five instructors participate in this workshop which will take place over three days. The participating instructors would have to be released from regular teaching duties, but I am confident that the opportunity to participate in the workshop would greatly benefit both the instructors and the college.

I will require from you a letter indicating your support before I can begin recruitment of participants. As I mentioned earlier, I hope to conduct the workshop in mid-January, thus I would appreciate as early a response as possible.

Thank you for your support and cooperation.

Yours truly,

Barb Schur

November 15, 1989

Mark Cleveland
President, Arctic College
Box 1769
Yellowknife, NWT
X1A 2P3

Dear Mr. Cleveland;

As part of the research for my master's thesis I hope to be able to visit Aurora Campus in Inuvik to conduct a professional development workshop. During this workshop, I will be using a process called micro-teaching which provides instructors an opportunity to teach a short lesson to a small group of colleagues, receive feedback on this lesson and then to view segments of their lesson from the recorded video-tape. Results of this process have proved to be very successful with pre-service teachers, and I am interested in using it as a in-service technique.

I plan to use a group of five instructors for this study which will occur over two and one half days with one hour interviews occurring the third and fourth days. These instructors would have to be released from their normal teaching duties, but I am confident that the opportunity to participate in the workshop would greatly benefit both the instructors and the college.

I would appreciate your support and endorsement of this project. I have spoken with Mr. Jay Goman informally about my research interests and he seems supportive and interested. Would you please indicate your approval and permission in a letter to Mr. Goman and myself.. I would like to begin data collection in January. Of course, once I receive your approval, I will keep you informed of all research procedures and results.

Thank you for your attention and consideration.

Yours truly,

Barb Schur

cc: Jay Goman

OFFICE OF THE PRESIDENT

1990 02 14

Ms. Barb Schur
Box 187
ALBERTA BEACH, ALBERTA
TOE 0A0

Dear Ms. Schur:

Research Project - Micro Teaching: Inservice Education for Adult Educators

This letter confirms the support of this office for your project. However, all details related to securing participation of College field staff should be negotiated directly with Mr. J. Goman, Vice President, Aurora Campus, in Inuvik. Mr. Goman can be contacted at 979-7877.

The best of luck with your study.

Yours sincerely,

Mark Cleveland
President

cc: J. Goman

P.O. BOX 1789 Yellowknife, NT X1A 2P3 • Telephone (403) 920-6306 • Fax (403) 873-0238

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES

SCIENTIFIC RESEARCH LICENCE NUMBER 10015

ISSUED TO: Barbara Schur
Box 187
Alberta Beach, Alberta
T0E 0A0
403 924 3385

DATED: Feb 1, 1990

FILE NUMBER: 12 410 303

RESEARCH TEAM:

AFFILIATION: Adult, Career and Technology Education, University of Alberta

FUNDING AGENCY: Logistics support from Inuvik Research Centre

TITLE: Micro-Teaching: Inservice Education for Adult Educators

OBJECTIVE: to explore the teaching knowledge, attitudes and skills of five adult educators;

DATES: February

ITINERARY: Inuvik, N.W.T.

Scientific Research Licence 10015 expires on December 31, 1990.
Issued at the City of Yellowknife on Feb 1, 1990.

J.D. Heyland
Science Advisor

P.O. Box 1017, Yellowknife, Northwest Territories, Canada X1A 2P2 / Telex 034-45528 / Tel (403) 873-7592

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES

Feb 1, 1990 12 410 303

Scientific Research Licence No. 10015

I would like to inform you that Scientific Research Licence No. 10015 has been issued to:

Barbara Schur
Box 187
Alberta Beach, Alberta
T0E 0A0
403 924 3385

to conduct the following study "Micro-Teaching: Inservice Education for Adult Educators". Please contact the researcher if you would like more information.

Ms. Schur will conduct a two and a half day workshop and will collect information from the adult educators using interviews, observations and analysis of participant's journals.

The study will be conducted at Inuvik, N.W.T. between February.

Sincerely yours

Anna Buss

Anna Buss
Science Administrator

Distribution:

Manager, Inuvik Research Ctr, Box 1430, Inuvik, N.W.T.
VP, Aurora Campus, Arctic College, Inuvik, N.W.T.
President, Arctic College, Box 1769, Yellowknife
Director, Policy & Eval. GNWT, Dept of Education, YK

P.O. Box 1617 Yellowknife, Northwest Territories, Canada X1A 2P2 / Telex 034-45528 / Tel (403) 873-7592

APPENDIX B

University of Alberta
Edmonton

Adult, Career and Technology Education
Faculty of Education

Canada T6G 2G5

533 Education South. Telephone (403) 492-3678
Fax (403) 492-0236

Dear Instructor;

As part of my Master's program in Adult and Higher Education, I am conducting research into the use of micro-teaching as a means of in-service education for adult educators. I would like to invite you to participate in a workshop on *Acknowledging Adult Learner Characteristics*. This workshop will include micro-teaching and will be highly participatory.

Micro-teaching is a controlled teaching situation where both class size and class time are greatly reduced. This process can be an effective means of providing new knowledge and skills, improving effectiveness, and increasing collegiality and professionalism.

For the purposes of this project, each participant will be asked to prepare and teach a total of two mini-lessons (15-20 minutes each) to the other instructors participating in the workshop. These lessons will be video-taped and segments of them replayed immediately following presentation of the lesson. The other group members will then be encouraged to provide the instructor with constructive feedback. Once each person has presented one lesson the process will be repeated.

After the workshop, interviews will be conducted; each interview will last approximately one hour. Participants will also be asked to keep a journal for one month after the study and I anticipate that each journal will contain four to five entries. A teleconference will be arranged at the end of the month, which will focus on issues related to your experiences during this project.

There will be no evaluation of instructor performance, and no members of Arctic College, other than the workshop participants, will be allowed to observe the micro-teaching sessions. All data, including video-tapes, will be kept confidential.

Mr. Goman has agreed to release the participants from their teaching duties for the workshop. Due to the highly interactive and participatory nature of micro-teaching, the number of participants will have to be limited to five. And, for the purposes of this study, participants should have a variety of backgrounds, experience and training.

Please indicate your willingness to participate by completing the form on the bottom of this page. Completion of this form does not commit you to the project; final selection of participants will be made by January 25. I would appreciate your responses as soon as possible as the workshop has been tentatively scheduled for early February. I will notify you in advance of the exact dates.

Thank you

Barb Schur

I am interested in participating in a two and one half day workshop, involving micro-teaching. I understand and am willing to undertake the time commitment that is involved

Name _____

Teaching experience_____

_____

_____

Where_____

_____

Subjects taught _____

_____

Related experience in area of specialization_____

_____

_____

Education background_____

_____

_____

APPENDIX C

MICRO-LESSON OBSERVATION SHEET

Excellent	Good	Satisfactory	Poor	Not Observed
E	G	S	P	N

Section 1 Instructor Confidence

	E	G	S	P	N
The instructor:					
1. Expressed enthusiasm in the lesson.					
2. Spoke in a tone that was relaxed and conversational.					
3. Maintained eye contact with students					
4. Spoke audibly.					
5. Avoided distracting mannerisms and expressions.					

What additional behaviors did the instructor use that gave you the impression he/she felt confident?

Excellent	Good	Satisfactory	Poor	Not Observed
E	G	S	P	N

Section 2 Adult Learning Characteristics

The instructor:

	E	G	S	P	N
1. Stated specifically the objectives of the lesson.					
2. Stated why the objectives were important in terms of student needs.					
3. Related the lesson to student's prior knowledge or experience.					
4. Made the learning relevant and meaningful for the learners.					
5. Encouraged students to ask questions, make comments and express ideas.					
6. Used students' comments or ideas to reinforce or clarify important points of the lesson.					
7. Condensed the important points covered in the lesson.					
8. Tied the important points together in a logical sequence.					
9. Left students with a clear idea of what they accomplished during the lesson.					

In what ways do you feel that the instructor was able to acknowledge the characteristics of the adult students?

_____

_____

_____

_____

_____

What techniques did the instructor use to motivate students?

_____

_____

_____

_____

_____

Excellent	Good	Satisfactory	Poor	Not Observed
E	G	S	P	N

Section 3 Teaching Techniques

The instructor:	E	G	S	P	N
1. Selected a technique of presentation suited to students' level of understanding.					
2. Selected a technique of presentation suited to the size of the group.					
3. Selected a technique of presentation suited to the material being presented.					
4. Illustrated key points during the presentation visually and verbally.					
5. Selected a technique of presentation that was suited to adult learning characteristics.					

In what specific ways was the technique of presentation suitable to the learners and to the lesson content?

Additional Comments and Suggestions

APPENDIX D

Interview Objectives

The purpose of the interview is to explore:

1. The changes in the instructors teaching skills, knowledge, and attitudes.

2. What extent the microteaching process caused the changes in skills, knowledge, and attitudes.

3. What extent these changes can be of benefit to the adult educators in their own classrooms.

Interview Questions

Having had the opportunity to participate in a workshop that had improving and increasing knowledge, skills and attitudes about teaching adults as its primary focus:

1. Describe your experiences during the microteaching workshop.

2. To what extent do you feel these experiences caused any changes in your:
   (a) knowledge about teaching techniques and adult learning theory,
   (b) attitude towards teaching adults,
   (c) your skill and ability to teach adults.

3. In what ways do you feel this experience can be of benefit to you as an instructor?

APPENDIX E

Journal Questions

Journal Question #1

Based on what you've experienced today, what would you consider to be your teaching strengths and weaknesses?

Journal Question #2

What are two new ideas (techniques) that were discussed during the workshop that you feel you might be able to apply in your own classrooms and why?

Journal Question #3

In what ways do you feel that the perceptions that you formed of your teaching effectiveness during the workshop has affected your performance in your classroom during the past week?

Journal Question #4

In what ways did the February workshop increase your awareness of the value of professional collegiality? (Sharing ideas and expertise with fellow instructors.) To what extent, if at all, have you been able to share and interact with other instructors since the workshop?

Journal Question #5

(Please refer to Journal Question #2)
Have you been able to implement the new ideas and techniques that you gained through participation in the workshop? Why or why not? To what extent do you feel you were successful?